RESTRICTED CIRCULATION

This paper is not an official document; it is for information only and references cannot be made to it in any printed publication without the permission of the author.

AGRICULTURAL MEMORANDUM NO 785

COMPOSITION OF MAIZE SILAGE AND ACCUMULATED TEMPERATURE

D FORSDYKE

Maize silage from farms in the SW Region has been analysed by ADAS Nutrition Chemists at Bristol and Starcross for the past 4 years; silages to which protein additives have been applied are not included in the data.

The results obtained together with the accumulated temperatures above 10°C for the period May to October at Filton are tabulated below:-

YEAR	1972	1973	1974	1975
No of samples	16	61	122	69*
% Dry Matter (DM)	20.2	25.4	21.5	30.2
% Crude Protein in DM (determined on dried)	10.5	9.3	10.6	9.3
% MAD fibre in DM	35.8	31.0	33.1	25.9
Estimated starch equivalent (as fed)	8.6	13.3	11.0	17.2
Filton accumulated temperature above 10°C	658	858	615	978

*samples analysed at Bristol only.

The following regression relationships were found between the composition of the silage and the accumulated temperature (TT).

Percentage dry matter = .025 TT + 4.61, r = .96.

Percentage crude protein in DM = - .0041 TT + 13.1, r = - .96.

Percentage MAD fibre in DM = - .022 TT + 48.7, r = -.90.

Estimated starch equivalent = .020 TT - 2.7, r = .92.

As the acreage of forage maize is likely to continue to increase it will be interesting to see if these relationships hold in the future, or if similar analyses are available, in different parts of the country.

Reference: A B Shingler, Technical Notes, Nutrition Chemistry Department, ADAS, SW Region, October 1975.

Any comments or suggestions on this paper should be sent to the author.

Meteorological Office
ADAS
Westbury-on-Trym
BRISTOL
BS10 6NJ